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EXAMINER

LEE, CHUN KUAN

ART UNIT	PAPER NUMBER
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2181

DATE MAILED: 12/09/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/726,363

Applicant(s)

LEETE ET AL.

Examiner

Chun-Kuan (Mike) Lee

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– The MAILING DATE of this communication appears on the cover sheet with the correspondence address –
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 December 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4,6-11,13 and 14 is/are pending in the application.
- 4a) Of the above claim(s) _ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4,6-11,13 and 14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claims 1 and 8 have been considered but are moot in view of the new ground(s) of rejection.

Claim Objections

2. Claim 1 is objected to because of the following informalities:

In claim 1, line 1, "(Original)" should be changed to – (Currently Amended) --.

Correction is required.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-4, 6, 8, 10-11 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yoshizawa (US Patent 6,789,138) in view of Wang et al. (US Patent 6,742,076).

As per claims 1 and 8, Yoshizawa teaches an apparatus system method comprising:

a CPU and a controller (Figure 1A and column 4, line 63 to column 6, line 34, where "CPU" is read on "first host controller" and "controller" is read on "second host controller"),

an interface unit coupled to said CPU and said controller (Figure 1A and column 4, line 63 to column 6, line 34, where "interface unit" is read on "device"),

the CPU capable of writing a plurality of data, wherein said data from the scanner are queued then transferred to the computer and the first data packet of the queue is the queue head (Figure 1A and column 4, line 63 to column 6, line 34, where "CPU" is read on "host controller", "writing" is read on "coupling" and "data" is read on "queue head"),

to a plurality of addresses in a memory space (Figure 1A and column 4, line 63 to column 6, line 34, where "plurality of addresses in a memory space" is read on "frame list"),

wherein the plurality of data are directly write to the plurality of addresses in the memory space when the scanner starts (Figure 1A and column 4, line 63 to column 6, line 34, where "when the scanner starts" is read on "during initialization"),

wherein the scanner can be connected to the computer by a USB (column 1, lines 23-31).

Yoshizawa does not teach the apparatus system method comprising wherein the plurality of queue heads are directly coupled to the frame list during initialization before

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any split-isochronous transaction descriptors where split-isochronous transaction descriptors are supported.

Wang teaches a data transfer system method comprising:

transfer of isochronous data at full speed (column 1, lines 39-56, where "isochronous data at full speed" is read on "split-isochronous transaction descriptors"); a USB host controller (Figure 1); and the reception of transaction descriptors and data in batches (Figure 3A and column 6, line 37-63).

Therefore, it would have been obvious to one of ordinary skill in this art, at the time of invention was made to modify Yoshizawa to include the apparatus system method comprising wherein the plurality of data are directly write to the plurality of addresses in the memory space when the scanner starts before any split-isochronous transaction descriptors where split-isochronous transaction descriptors are supported, because of the necessity to determine the type of interconnection that is used before any data transfer from the scanner to the computer.

It would have been obvious to one of ordinary skill in this art, at the time of invention was made to have modify Yoshizawa by the teaching of Wang, because including the apparatus system method comprising wherein the plurality of data are directly write to the plurality of addresses in the memory space when the scanner starts before any split-isochronous transaction descriptors where split-isochronous transaction descriptors are supported, would enable to transfer data in batches, thus reduce the

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number and frequency of interrupts send to microprocessor and therefore increases the USB data throughput.

As per claim 2, Yoshizawa as modified teaches the apparatus system method further including a USB host controller driver (Wang, Figure 1, where "USB host controller driver" is read off "host controller driver").

As per claim 3, Yoshizawa as modified teaches the apparatus system method comprising wherein the plurality of data are directly write to the plurality of addresses in the memory space before any transaction descriptors when the scanner starts (Yoshizawa, Figure 1A and column 4, line 63 to column 6, line 34 and Wang, Figure 1; Figure 3A and column 6, line 37-63, where "when the scanner stars" is read on "during initialization of the host controller").

As per claim 4, Yoshizawa as modified teaches the apparatus system method comprising wherein the plurality of data are directly write to the plurality of addresses in the memory space before any transaction descriptors after the scanner starts, because after the scanner starts and have determined the type of interconnection, the plurality of data are still directly wrote to the plurality of addresses in the memory space then transfer the plurality of data to the computer (Yoshizawa, Figure 1A and column 4, line 63 to column 6, line 34 and Wang, Figure 3A and column 6, line 37-63, where "scanner stars" is read on "initialization of the host controller").

As per claim 6, Yoshizawa as modified teaches the apparatus system method comprising wherein the host controller is a universal serial bus (USB) host controller (Wang, Figure 1).

Claims 10-11 and 13 repeat the limitations of claims 3-4 and 6 are therefore rejected accordingly.

Claims 7 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yoshizawa (US Patent 6,789,138) in view of Wang et al. (US Patent 6,742,076) as applied to claims 6 and 13 above, and further in view of the "NEC Forges Ahead with World's First USB 2.0 Host Controller LSI".

As per claim 7, Yoshizawa as modified teach the apparatus system method comprising wherein the host controller is a USB host controller

Yoshizawa as modified does not teach the apparatus system method comprising wherein the host controller is a USB 2.0 host controller.

"NEC Forges Ahead with World's First USB 2.0 Host Controller LSI" teaches the use of a USB 2.0 host controller.

Therefore, it would have been obvious to one of ordinary skill in this art, at the time of invention was made to modify Yoshizawa as modified by Wang to include the

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apparatus system method comprising wherein the host controller is a USB 2.0 host controller.

It would have been obvious to one of ordinary skill in this art, at the time of invention was made to have modify Yoshizawa as modified by Wang with the teaching of "NEC Forges Ahead with World's First USB 2.0 Host Controller LSI", because to include the apparatus system method comprising wherein the host controller is a USB 2.0 host controller, would enable to provide high bandwidth serial interface utilized for interconnecting computers with high performance peripherals and broadband Internet services.

Claim 14 repeats the limitations of claim 7 are therefore rejected accordingly.

Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yoshizawa (US Patent 6,789,138) in view of Wang et al. (US Patent 6,742,076) as applied to claim 8 above, and further in view of Hirayama (US Patent 6,920,245).

As per claim 9, Yoshizawa as modified teaches the apparatus system method comprising the controller is associated with the USB host controller driver (Wang, Figure 1, where "USB host controller driver" is read off "second host controller driver");

the CPU, wherein the CPU is coupled to the scanner (Figure 1A and Figure 2);
and

wherein the scanner transmit image data to the computer by using CCD (column 4, lines 30-38).

Yoshizawa as modified does not teach the apparatus system method comprising the CPU is associated with the first host driver.

Hirayama teaches system method with a scanner section comprising:

a scanner CPU (Figure 2); and

a CCD driver associated with the scanner CPU (Figure 2 and column 6, line 44 to column 7, line 32).

Therefore, it would have been obvious to one of ordinary skill in this art, at the time of invention was made to modify Yoshizawa as modified by Wang to include the apparatus system method comprising the scanner CPU is associated with the CCD driver (where "CCD driver" is read on "first host driver").

It would have been obvious to one of ordinary skill in this art, at the time of invention was made to have modify Yoshizawa as modified by Wang with the teaching of Hirayama, because not only is it well know in the art to including the apparatus system method comprising the scanner CPU is associated with the CCD driver, but also would enable the scanner CPU to proper drive the color image sensor.

Conclusion

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chun-Kuan (Mike) Lee whose telephone number is (571) 272-0671 and email is chunkuan.lee@uspto.gov. The examiner can normally be reached on 8AM to 5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Popovici Dov can be reached on (571)272-4083. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

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Any inquiry of a general nature of relating to the status of this application should be directed to the Group receptionist whose telephone number is (571) 272-2100.

Mailed responses to this action should be sent to:

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Faxes for Official/formal (After Final) communications or for informal or draft communications (please label "PROPOSED" or "DRAFT") sent to:

(571) 273-8300


Hand-delivered responses should be brought to:

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C.K.L.
12/05/2005



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